

IN THE SPECIFICATION:

Page 1, line 5, insert:

This application is a filing under 35 USC 371 of PCT/EP2003/006915 filed June 30, 2003.

Background of the Invention
lines 13-18:

In order to connect together two lacquered wires, without the lacquer coating having to be previously removed, it is known to firstly connect an end of the lacquered wire with a conductor, in order to then connect the conductor with the other end by means of ultrasonic welding. This type of connection is known e.g. from electric motors. In this way, ~~and~~ an insulated armature winding is welded to a copper plate, from which further extends an insulated wire.

Page 2, above line 1, insert:

Summary of the Invention
lines 1-4:

The present invention is based on the problem of further developing a method of the first-mentioned type ~~to~~ so that a plurality of lacquered wires can be connected to one another without an electrically conductive connecting component having to extend between them and without the lacquer having to be firstly removed.

Page 3, line 23, insert:

Brief Description of the Drawings

Page 4, line 2, insert:

Fig. 3a is a perspective view of an ultrasound welding machine used to weld lacquered wires according to the invention,

line 14, insert:

Fig. 9 is a perspective view of a flexible mesh surrounding wires which are to be welded.

Description of the Preferred Embodiments

lines 15-23:

According to the state of the art as shown in Fig. 1 and 2, it is possible to connect a lacquered wire 10, comprising the core 12 of electrically conductive material such as copper or aluminum and outer lacquer coating 14, with an electrically conductive carrier 16. This is effected by means of ultrasonic welding. The wire 10 is deformed in accordance with the shape of the sonotrode and the application of ultrasound and the effect of ~~pressure~~ pressures which occur, the lacquer coating 14 being separated in the area of contact between the carrier 16 and the lacquered wire 10 as a result of their movement relative to one another, and the desired contact ~~14~~ can thereby be obtained as the welding. Removed lacquer material is thereby deposited between the contact or weld positions indicated in Figure 2 by reference numerals 18 and 20.

Page 5, lines 1-10:

According to the invention, it is now possible to connect a plurality of lacquered wires to one another in an electrically conductive manner by means of an ultrasonic welding machine. For this it is foreseen in accordance with Figures 3 to 8 that corresponding lacquered wires - in the embodiment, the ends 22, 24 26 thereof - are placed in a cup-shaped sleeve 28 of electrically conductive material such as copper. In the sleeve 28, the wires ends 22, 24, 26 are packed more or less tightly. Because of the lacquer coating, however, an electrically conductive connection exists neither between one another nor to the sleeve. According to the invention, the sleeve 28, with the wires 22, 24, 26, is placed between the work tools, i.e. the sonotrode 66 and the counter electrode or anvil 68 of an ultrasound welding machine 65, as shown in Fig. 3a, and ultrasound is then applied.

Page 5, line 30- page 6, line 7:

While an inherently rigid element is disclosed in the embodiment, which receives the wire ends in the region of lacquered wires which are to be electrically conductively connected together, it is also possible, without further measures, to use a flexible material as the surrounding material, as shown in Fig. 9. Thus, e.g. a copper mesh 70 can be employed which, to the required extent, surrounds the lacquered wires 72, 74 which are to be connected, in order to be subsequently fixed by ultrasound, whereby a fixed connection with the lacquered wires in the above-described manner and a stripping thereof occur simultaneously. It is also notable that the material enabling the electrically conductive connection can surround the lacquered wires not only fixedly but also in an at least partially shape determining manner.

Page 6, lines 9-10:

There is also a possibility ~~to electrically of~~
~~conductively connect~~ connecting the lacquered wires in an
electrically conducting manner not only to one another but
also to e.g. stranded wires.

lines 19-28:

There is, however, also the possibility of placing lacquer wires 52, 54, 56 which are to be welded into preformed receptacles 58, 60, 62 which are open at one side, and which have a trapezoidal shape (Figure 8c), a circular sectional shape (Figure 8d) or a U-shape (Figure 8e) in section. The lacquer wires 52, 54, 56 and any other conductor 64 to be welded are then placed in the forms 58, 60, 62 and subsequently fastened by the ultrasound welding process. In addition, the corresponding work tool of the ultrasound welding machine can have a geometry which enables closing or folding of the receptacles 58, 60, 62. By the ultrasound effect, the wires 52, 54, 56 are then fixedly enclosed by the

receptacles ~~68~~ 60, 62, the insulating lacquer of the wires 52, 54, 56 being simultaneously removed and the bared wires 52, 54, 56 then being welded to one another.

LAW OFFICES
DENNISON, SCHULTZ & MACDONALD
SUITE 105
1727 KING STREET
ALEXANDRIA, VIRGINIA 22314-2700
703 837-9600